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ARE JAPANESE TRADITIONAL STAPLE FOODS, RICE AND UDON NOODLE, INCREASED RISKS OF INCIDENT METABOLIC SYNDROME?

Poster Contributions
Hall C
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Background: The UNESCO is expected to register traditional Japanese food as an intangible cultural heritage asset in December, 2013. However, the association between rice intakes and metabolic syndrome (MetS) is under controversy. There is no study on the association between udon noodle intakes and MetS.

Methods: A total of 5854 participants (30-79 years old) in the Suita Study underwent a medical examination as a baseline survey between 1990 and 1994. Each subject completed a fasting blood collection and a food frequency questionnaire (FFQ). MetS was defined by the NCEP-ATPIII criteria. All participants were invited every 2 years to undergo a medical examination for 7 years on average. Of the baseline participants, 2052, 2339, 831, and 2209 subjects were excluded due to MetS, hyperlipidemia, diabetes, and hypertension at the baseline survey, respectively. The risks of incident MetS and the components were analyzed by the adjusted Cox proportional hazards model according to the intakes of rice and udon noodle quartiles, which were most popular Japanese staple foods. The rank correlation between dietary intake of rice estimates from dietary records and those from the FFQ was 0.82.

Results: During the follow-up period, 1260 incident MetS were observed. The adjusted hazard ratios (HRs, 95% confidence intervals, CIs) of hyperlipidemia (non-HDL cholesterol ≥190 mg/dL), MetS, and higher blood pressure (≥130/85 mmHg or antihypertensive agents) were 0.81 (0.66-0.99) in rice intake ≥380g/d, 0.83 (0.69-0.99) in rice intake between 220 and 280g/d, and 0.84 (0.72-0.99) and 0.79 (0.66-0.94) in rice intake between 220 and 380g, respectively, compared with rice intake <220g/d. The adjusted HRs (95% CIs) of incident diabetes (fasting blood glucose ≥126 mg/dL or antidiabetic medication), MetS, and elevated waist circumference (≥85 cm in men and ≥80 cm in women) were 1.23 (1.00-1.51), 1.19 (1.05-1.35), and 1.15 (1.02-1.29) in udon noodle ≥1 bowl/d, respectively, compared with the seldom intake.

Conclusions: Moderate intake of rice may reduce the risks of incident Mets and higher blood pressure. Daily intake of udon noodle may increase risks of MetS and abdominal obesity in Japanese urban population.